

"RADIO FREQUENCY APPLICATIONS IN MATERIAL HANDLING"

Have you taken a hard look at your operation to identify opportunities to improve productivity and control? Many of those opportunity areas might benefit from Radio Frequency (RF) communications technology. Radio Frequency is not Star Wars that material handling managers should fear. It is a simple paperless, on-line communication between operations and your computer. The justification for RF is not dependent on utilizing sophisticated handling equipment such as an automated storage and retrieval system. Many RF applications are controlling conventional counterbalanced lift truck fleets.

POTENTIAL APPLICATION AREAS

RF communication is a potential application anywhere in your operation where there is a need to get information to people or where you use paper controls. Following are some possible application areas with an indication of how the technology could be used:

Receiving

RF terminals can be used on the receiving dock as electronic receiving worksheets. RF permits real time receiving updates.

Putaway

RF terminals can be mounted on lift trucks to instruct operators where to locate products that have just been received or manufactured, and to confirm the transaction. RF permits real time updates of stock availability in the picking locations.

The possible benefits of using Radio Frequency (RF) communications are speedier transactions, paperless operations, improved control and reduced costs in your operation.

Replenishment

RF terminals can be mounted on lift trucks or other material handling equipment to direct the replenisher to a location and to confirm a transaction. Tied into a real time inventory control system, RF can virtually eliminate replenishment timing problems.

Picking

Wireless and paperless picking can be achieved through RF terminals. These terminals can be mounted on powered mobile equipment or can be hand held compact units on carts. RF permits a completely interactive system, which can be used to make a random pick location system work.

Shipping

RF terminals can be used to confirm loading operations and generate manifests. RF terminal mounted in shipping are usually similar to those described in receiving.

Yard Tractor Dispatch

RF terminals mounted inside the yard tractor can provide an interactive communication system for trailer moves.

BENEFITS

The benefits of Radio Frequency (RF) communication fall into the following categories:

- Speed-Transactions are immediate, both to and from the computer.
- Paperless operations - The printing, distribution and handling of paper is eliminated.
- Control-Transactions by person can be tracked on a real time basis to monitor a complex operation.

COSTS

The costs of a radio frequency communications system can be grouped in the following ways:

1. Terminals
2. Base Station
3. Software

SUMMARY

RF is not technology to be feared for reasons of complexity or cost. In some cases, however, it is important when considering the feasibility of introducing RF, to determine the expense involved in integrating the concept into your existing software.

RADIO FREQUENCY MATERIAL HANDLING APPLICATION

OPERATING ENVIRONMENT

This application is for a frozen food manufacturer and distributor. Operations are scheduled for six days per week and two ten hour shifts per day.

OPERATING METHOD

After the finished product has been palletized and shrink wrapped, the lift operator applies a bar coded label. The label contains a unique six digit identification number. The operator scans the bar code label and enters into his on-board terminal the SKU number, pallet quantity and the warehouse location. The computer automatically logs the time and date when the information has been entered into the terminal.

To retrieve pallets, messages directing the lift operators to specific locations are displayed on the terminal screen. Retrieval logic includes first in, first out and easiest access. Transaction confirmations of retrievals are also keyed in.

RESULTS

The warehouse now operates with a real time, paperless environment. Inventory accuracy approaches 100%. Lift truck operator productivity has been increased dramatically. A side benefit is that whenever batch quality is questioned, all pallet positions produced during a specific time period can be identified and restricted from access.

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